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ABSTRACT

The core of the work described in this paper is a small-scale qualitative research project based on the classroom observation of student teachers in England following a 1-year "PGCE" (postgraduate continuing education) course in 1992. This project was underpinned by an exploration of a theoretical model of the nature of the relationship between practice and theory and formed an initial attempt to develop a practical dialogic methodology for co-operative reflection on professional practice: in this case for both student teachers and their trainers. The classrooms under consideration were mathematics and modern language classrooms in British secondary schools. Part 1 of the paper raises issues about co-operative action and its place within educational research. Part 2 offers a brief discussion of the nature of the relationship between theory and practice together with an attempt to construct a three-level triadic model to show how this applies to professional training. This model is used later in the paper as a framework for discussion of students' practice and the theories and range of practices of teacher educators. Part 3 focuses directly on four student teachers' behaviors and their theories. Part 4 explores the processes used by the trainers to articulate their theories about their professional work. Part 5 looks directly at some of the hypotheses and questions about classrooms and about knowledge of the professional practice of teacher educators raised through the work of the project. Part 6 offers a summary of the ad hoc dialogic methodology employed during this work. (Contains 24 references and provides a list of the 27 occasional papers published by the Centre for Language in Education.) (Author/ND)

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CENTRE FOR LANGUAGE IN EDUCATION

UNIVERSITY OF SOUTHAMPTON

OCCASIONAL PAPERS, 27

DEVELOPING AN INTERACTIVE METHODOLOGY:

A CO-OPERATIVE APPROACH

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"Dialogue amends and enlarges perception and makes it possible to distinguish the accidental and individual from the necessary and universal."

Vandenberg 1974

DEVELOPING AN INTERACTIVE METHODOLOGY : A CO-OPERATIVE APPROACH

Abstract

Foreword

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ABSTRACT

The core of the work described in this paper is a small-scale qualitative research project based on the classroom observation of student teachers following a one-year PGCE course in 1992. This project was underpinned by an exploration of a theoretical model of the nature of the relationship between practice and theory and formed an initial attempt to develop a practical dialogic methodology for co-operative reflection on professional practice: in this case for both student teachers and their trainers. The classrooms under consideration are Mathematics and Modern Language classrooms in British secondary schools.

Part 1 of the paper raises some issues about co-operative action and its place within educational research.

Part 2 offers a brief discussion of the nature of the relationship between theory and practice together with an attempt to construct a three level triadic model to show how this applies to professional training. This model is used later in the paper as a framework for discussion of students' practice and the theories and range of practices of teacher educators.

Part 3 focuses directly on students' behaviours and their theories.

Part 4 explores the processes used by the trainers to articulate their theories about their professional work.

Part 5 looks directly at some of the hypotheses and questions about classrooms and about knowledge of the professional practice of teacher educators raised through the work of the project.

Part 6 offers a summary of the ad hoc dialogic methodology employed during this work.

Foreword

This paper gives details of a co-operative research methodology developed in the course of exploring the processes of teacher training. To be actively involved in training teachers is to be situated in a unique position vis-à-vis educational theory and practice. These latter are a highly contested binary pair, and their interpretation and role in training to teach is at the heart of recent reforms in initial teacher education in England. But the research presented here predates these reforms. It focuses quite particularly on what theory and practice constituted for two teacher trainers and how we made sense of our everyday experience with students.

At the outset, we were aware of our position as former (now inactive) teachers of our respective subjects. We came to the task of training students with separate previous experiences as teachers, as well as academic knowledge acquired in the course of professional INSET, post-graduate studies and small-scale research projects. Our removal from the classroom to a Higher Education training institute entailed a change of role, a closer dialogue with educational theory and a more active involvement in research. Yet, we were still also actively involved in teaching our subjects; but this time through out students.

This paper sets out the way we attempted to use our respective experiences and positions to develop a methodological framework that took account of different spheres of activity and their interconnections. We were concerned to provide an authentic approach for the area in which we were involved. In initial discussions we both expressed dissatisfaction with predominant quantitative and qualitative research methods used in education. These often seemed too broadly descriptive, decontextualised and based on observations which took little account of the researcher's own knowledge and agenda in conducting enquiry. Furthermore, we found much of this research fragmented pedagogic experience in a way that we no longer recognised the everyday events that had become familiar to us as teachers and which we identified in our students' practice. Data was often torn into strips and brought together under various categories employed to give validity by adopting pseudo-scientific terminology. These categories were rarely analysed in terms of their providence or their relationship to the researcher. Indeed, researchers seemed content to plough their corner of the pedagogic field and to overlook the practical implications of what they produced. We were interested in representing such practice in a more authentic way.

However, we were equally unimpressed by methodological alternatives that provided accounts of individual experiences; often claiming to be phenomenological or hermeneutic. Many of these accounts read as being highly subjective, self-indulgent and bordering on solipsism.

Our primary intentions were sixfold:

1) To develop a rigorous methodological framework to shape our research. By 'rigorous' we intended theoretically robust and objectively accountable.

2) To work with raw experience and data without pre-set schemes or narratives, and to integrate data from a number of sources.

3) To allow time and space for an interactive development between theory and practice in our research context.

4) To avoid being either overly subjective or pseudo-scientific but to say something that was practically authentic.

5) To not only recognise but make use of our respective knowledge bases and pre-existent skills.

6) To develop the research of a particular context; namely, whilst working with students in the course of training.

This paper is an account of what happened in practice. It sets out what we did in a developmental way; what our initial concerns were; our reading of educational theory; how these evolved; and details of the project we undertook in order to try out our ideas.

However, the focus for the paper is the co-operative, interactive aspect of our work since we believe this dimension is often overlooked. What we have to say arose in an almost semi-independent manner in the course of our joint tackling of the practical and theoretical issues involved. We wanted to systematise this co-operative principle, offer an example of it in practice, and suggest guidelines for others who might wish to proceed along similar lines in their own contexts.

DEVELOPING AN INTERACTIVE METHODOLOGY

PART 1 INTRODUCTION

The following is an attempt to identify essential and determining characteristics of an ad-hoc methodology which proved in practice to offer both insights into existing classroom activities and to identify previously hidden areas for developing innovative practice. What follows is in part a description of a sequence of events, i.e. the construction of a plausible narrative; but it also attempts to highlight those aspects which appear to be salient features of the methodological undertaking which could prove applicable to future projects.

A. Situating the researcher

Writing about educational research methodology often appears to abstract the researcher from the process of research in order to parallel as closely as possible procedures adopted by "objective" scientific research. This 'objective' stance is frequently undermined by the very terms of engagement in educational research of its practitioners. Most researchers will be found working within projects which interest them and in which they have prior experience. These interests and prior experiences are usually the source of motivation of the research work undertaken. The presuppositions which arise from and give rise to the researcher's interests and experiences are often seen as unfortunate limitations to the rigour of the research and consequently in the name of scientific 'objectivity' attempts are made to limit, exclude, or ignore these. This account is an exploration undertaken jointly by two researchers in such a way that their presuppositions, interests and experiences became a major structuring element of the project. The similarities and differences in their interests and backgrounds gave rise to agreements, differences and misunderstandings which were essential ingredients in the design, methodology and outcomes of the project.

In "Unended Quest", Popper writes:

> The decisive thing, seems to me that we can put objective thoughts - that is theories - before us in such a way that we can criticise them and argue about them. To do so, we must formulate them in some permanent (especially linguistic) form.
>
> (Popper 1974: 182)

Claims to objectivity and rigour in the present context are based on the researchers' critical approach to their agreements and misunderstandings in the above Popperian sense. Indeed, we propose to demonstrate the very ways we brought such

understandings and disagreements before us and how these were used in developing theories in the course of carrying out the research.

B. Co-operative Action

It is perhaps self evident that to undertake a co-operative project of any kind, the participants must have some common language and experiences. Without these, 'reaching understanding' (Verstandigung) to use a term from Habermas (1981 : 307), is doubtful and the co-operation itself is likely to be unproductive. Co-operation without difference is sometimes seen in educational research as an ideal for which to strive, but is ,in essence, an end state analogous to working alone.

Little attention has been given to complementary conditions where participants in any co-operative project are different from one another and engage collaboratively in order to have access to experiences and insights not their own. This fact may seem trivially obvious, but for the project, proved not only to provide a strong motivational force (a need to understand) but also had a formative effect of the nature of the work itself. Before any rational analysis of co-operation is undertaken, we have attempted to exemplify some salient factors which differ (variables) in practice and which influence the process of co-operating itself.

Co-operation in research and development

Educational co-operation is found in teacher based curriculum development; for example, large scale projects such as Secondary Mathematics Individualised Learning Enterprise, where teachers working in London schools met to produce pupil materials or local developments within a school or department when, for instance, a new scheme of work was to be implemented. The Graded Objectives Scheme in Modern Languages is another good example of teachers co-operating intra- and inter-institutionally to effect curriculum innovation. Teachers engaging in co-operative actions like these have their status in common, their interests as practitioners and their prior experience in classrooms; but their individual characteristics and the relatively autonomous, if not isolated, nature of their classrooms provide sufficient variety to power collaboration.

There are also numerous examples of co-operation between teachers and educational researchers. Such collaboration can take various forms:

i. the teacher may be the subject of study of the researcher. The willing co-operation of the subject, teacher, is clearly necessary if the research is to be other than strictly behavioral: for example, Munby and Russell's study (1992) of Debra training to teach Chemistry.

ii. the teacher may be part of a differentiated team of teachers and educationalists ; as in the pioneering work of Lawrence Stenhouse (1975) on curriculum innovation, or as illustrated by the collaborative action research teams set up by Oja and Smulyan (1989)

iii. the teacher may be an active participant as teacher researcher, undertaking personal (insider) research in their own school or classroom; for example, Diane Garner's research as an elementary school teacher presented in the account by Ely et al. (1991) on co-operative research.

In each case, the status and past experiences of the collaborating practitioners were of significantly different kinds. What was shared was an interest in current experiences in the school or classroom and possibly the experiences themselves. The purposes of teacher and researcher are, however, necessarily distinct not least in their fields of application (cf. Tripp 1993).

Of course, co-operation between educational researchers is also common; for example, working as a team in order to extend the range of skills brought to bear on a particular project. The researchers within the team may well differ in status, interests, past experience and role taken within the research team. In the interests of reliability, it is unlikely that researchers with different interests and backgrounds would undertake similar tasks without intensive training; consistency in the data being of paramount importance.

This above brief account is intended to begin to give some indication of the characteristics of participants which can be identified in practice as affecting the nature of co-operative action; for example, status, prior experiences, current interests and purposes, intended fields of application. In the following paragraphs we will make these quite specific for the present context by detailing our own characteristics and the project we undertook. In the next section, we will then move on to set out the theoretical underpinning to the co-operative methodology we are outlining.

C. The Researchers

Here we describe the two researchers in terms of the characteristics identified above, which seem to us to have played a significant part in determining the nature of the co-operative research undertaken. As researchers of equal status, i.e. Lecturers in Education, with both common and differing areas of interest and expertise, we co-operated by undertaking similar tasks, then comparing observations and interpretations. Although we had established in our discussions prior to this research that we had sufficient common language to establish shared meanings or consensus (Habermas 1981), there were important and significant differences between our prior experiences and current

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purposes:

SUBJECT SPECIALISM - mathematics education and modern languages education.

TEACHING EXPERIENCES - both researchers had substantial teaching experience in British secondary state schools but in schools of very different characters. Both had been head of departments. Both worked in initial teacher training and teacher education.

INTERESTS - both interested in theories about classrooms and teacher training; in the nature of educational theory itself and in the relationships between practice and theory.

BACKGROUND - one researcher had strong theoretical background: a theoretically based second degree, extensive personal research work on a range of projects and in a range of academic areas. The other had substantial practical experience of research and curriculum development work as LEA INSET provider, advisory teacher and as a member of a team of teacher-researchers.

This range of characteristics made it possible to envisage ways in which our differing frames of reference (culture clash) could be employed to produce a "critical imagination" (Popper 1974 : 47) with the potential to expand the limits often encountered in "curriculum subject" based research, whilst preserving our individual subject orientations.

D. The Project

A small scale research project was devised which would allow us to open up (i.e. to identify issues and formulate questions) the experiences which our PGCE students underwent in the course of their main school experience. Our intention was to identify salient features of the students' activities in schools in order to formulate questions and hypotheses for further exploration. The purpose in working co-operatively was not only to explore and compare our students' activities in school, but also to investigate our own practice as teacher trainers; to articulate and examine critically our theories, beliefs and presuppositions. We decided that working co-operatively would mean involving ourselves equally in each aspect of the work; e.g. visiting students teaching, shadowing students, devising frameworks for describing students activities, developing appropriate ways to analyze data collected. Defining co-operation in this way served to preserve equality of status in the work and made it necessary that discussion and dialogue be a major element in the work undertaken.

PART 2 EDUCATIONAL THEORY

A. Our initial discussions

This section offers a brief account of the basis of the researchers' discussions of the nature of educational theory. These discussions took place prior to formulation of this project, and both influenced the nature of the investigation and offered a three layered structure for its analysis.

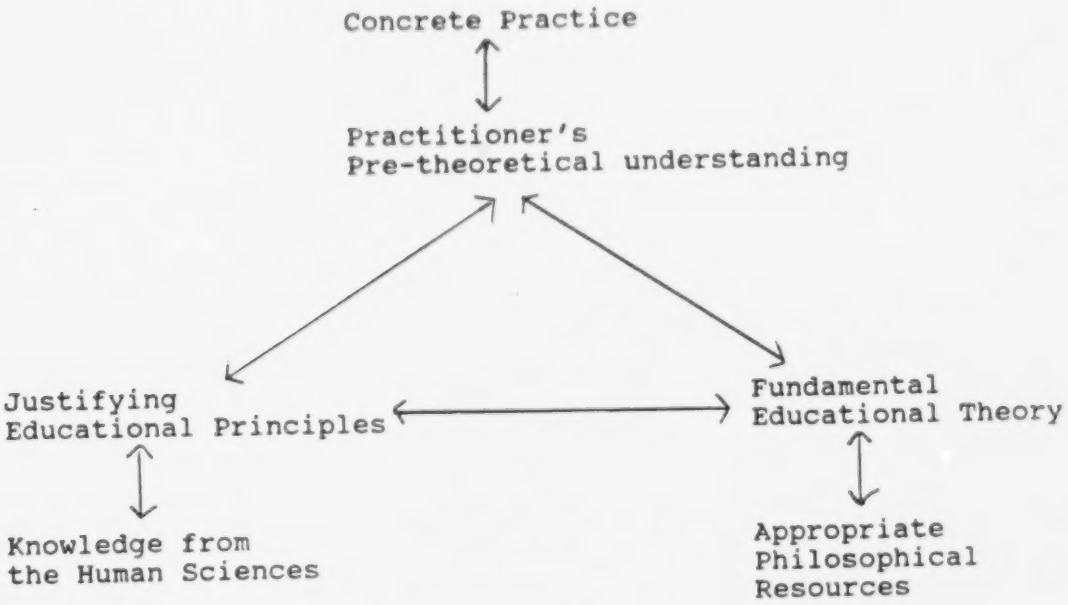
From our readings, we focused on 1960's as being a watershed in formulations on the nature of educational theory and its status in teacher education. Initially, we considered the work of the British philosopher Hirst. In a seminal paper (1966) Hirst criticised the, until then, salient view that education could be considered as an applied science; that it was simply a question of extrapolating the findings of the normative sciences to the practical field in order to establish effective methodologies. In place of this view Hirst set out an intermediary realm between the natural sciences and teaching that he staked out in the name of 'educational theory'. For him educational theory was not simply a single discipline but a form of thought to which almost any relevant discipline might contribute; although in his case, he emphasised the central role of history, philosophy, psychology and sociology. This multidisciplinary character of educational theory was an essential feature of Hirst's scheme, where empirical data would be worked on through the human sciences to provide the basic rationale for what to do with pupils in classrooms.

Having absorbed Hirst's work, we turned to the phenomenological-hermeneutic twist given to it by Vandenberg (1974). Essentially, Vandenberg turns Hirst scheme on its head. Drawing on the existential/phenomenological tradition and referring constantly to the works of such writers as Heidegger, Bollnow and Gadamer, Vandenberg initially recognises the importance of the existence of the field of educational theory as developed by Hirst. In particular, he agrees with Hirst in underlining the autonomous, though semi-dependent nature of educational theory. However he criticises Hirst for providing 'no criteria of coherence to unify educational principles'. Vandenberg attempts to build a more rigorous version of educational theory out of a correction to Hirst's claim that educational concepts have no logical characteristics of their own:

> It is not a question of examining the logical characteristics that educational concepts may or may not already have, as if these concepts existed autonomously in a Platonic realm of ideas independent of someone's having them in mind, but rather a matter of finding educational phenomena (or facts) about which one will subsequently formulate a theory with concepts that in fact do have the requisite logical - and ontological - characteristics.
>
> (Vandenberg 1974:187)

Vandenberg takes Hirst's hierarchical scheme, which is a kind of theory-into-practice model and builds a triangular version of it by claiming that practice can be the grounding of logical characteristics that shape educational theory. Talk about practice can then be viewed as a kind of fundamental expression of educational theory.

The following diagram illustrates Vandenberg's scheme:



(Vandenberg 1974: 191)

Diagram 1: Triadic relationship between theory and practice

The model is an attempt to ground educational theory in actual concrete practice. Any practitioner's understanding of education is developed through the experience of classroom practice. This understanding might be called 'horse sense' or 'tacit knowing' (Polyani 1975 : 30); in other words, that sense of what-to-do that is not articulated. When this 'pre-theoretical knowledge' is articulated in some form that there is an expression of 'fundamental educational theory'. In Vandenberg's terms:

> When the practitioner's pre-theoretical understanding is rigorously explicated by immanent reflection, i.e. by an interpretive hermeneutic, it becomes 'fundamental educational theory. (1974: 190).

It is through 'fundamental educational theory' that practice connects with the practical understanding and knowledge formed from the normative sciences in the shape of 'justifying educational principles.' Fundamental educational theory is therefore a kind of precipitation of thought about practice that is partly formed in and partly forms actual classroom teaching. 'Practice' is the criteria of coherence that unifies the amorphous nature of Hirst's educational theory.

This 'practice' is essentially personal, unselfconscious, uncritical and contextually bound, but it is linked in a dialectical relationship to the various levels of operation of educational theory. 'Practice' is thus conceptualised as a motor for the modification of educational principles, as the way is now open for the former to influence and shape the latter.

The strength of this perspective on educational theory is the way it is able to locate levels of educational theories in terms of their position with respect to the actual practice of classroom teaching, philosophical sciences and the special normative sciences. Its hermeneutic nature necessitates the formation of a dialectic between personal experience and an objectively presented discussion of academic knowledge. The application of this model to the activities of teacher training, is undertaken in the section which follows.

B. A Framework for Analysis

Applying Vandenberg's model to the complex processes which make up teacher education gives rise to a multi-level framework for analysis. This framework is necessarily organised around the participants engaging in teacher education: student teachers, trainers as teachers and teacher educators. The activities of each group of participants might thus be taken as the basis for developing a 3-level model where the levels are assumed to be distinguishable if not entirely separable. These levels can initially be defined as follows:

Level 1, Students' practice and their theorising.

Level 2 Teachers' practice and their theories about teaching

Level 3 Teacher Educators' practice and theory formation

Each of these distinct sets of activities (levels as above) will require its own triangle of practice, theory and principles. In many instances, the participants in the processes described by the model are different people i.e. student teachers, teachers in schools and teacher trainers, but the descriptions refer to the activities of the participants rather than the participants themselves. In this project, there are only PGCE students and their teacher educators. Teachers' practices and theories, in this case, refers to the theories of teacher educators about teaching based on their own classroom teaching experiences.

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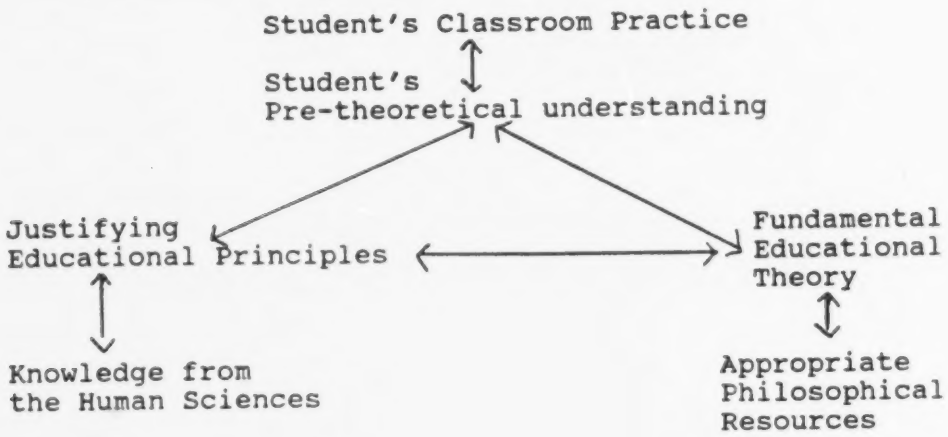
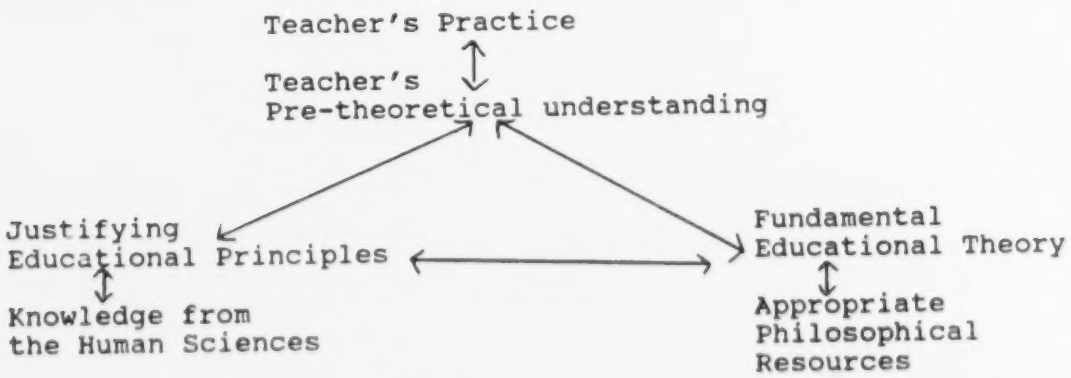
Diagram 2 A three -level model for practice and theorising

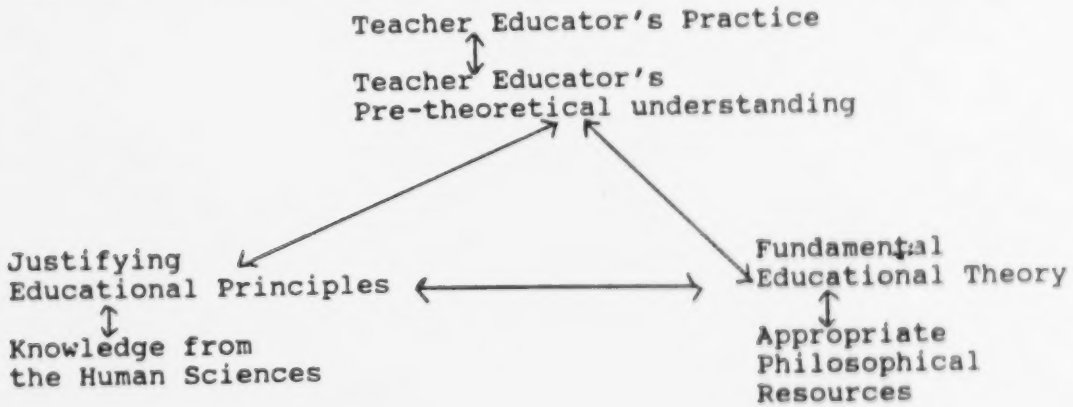
LEVEL 1 STUDENTS' PRACTICE AND THEORIES



LEVEL 2 Teachers' practice and their developing theories



LEVEL 3 Teacher Educators' practice and theory formation



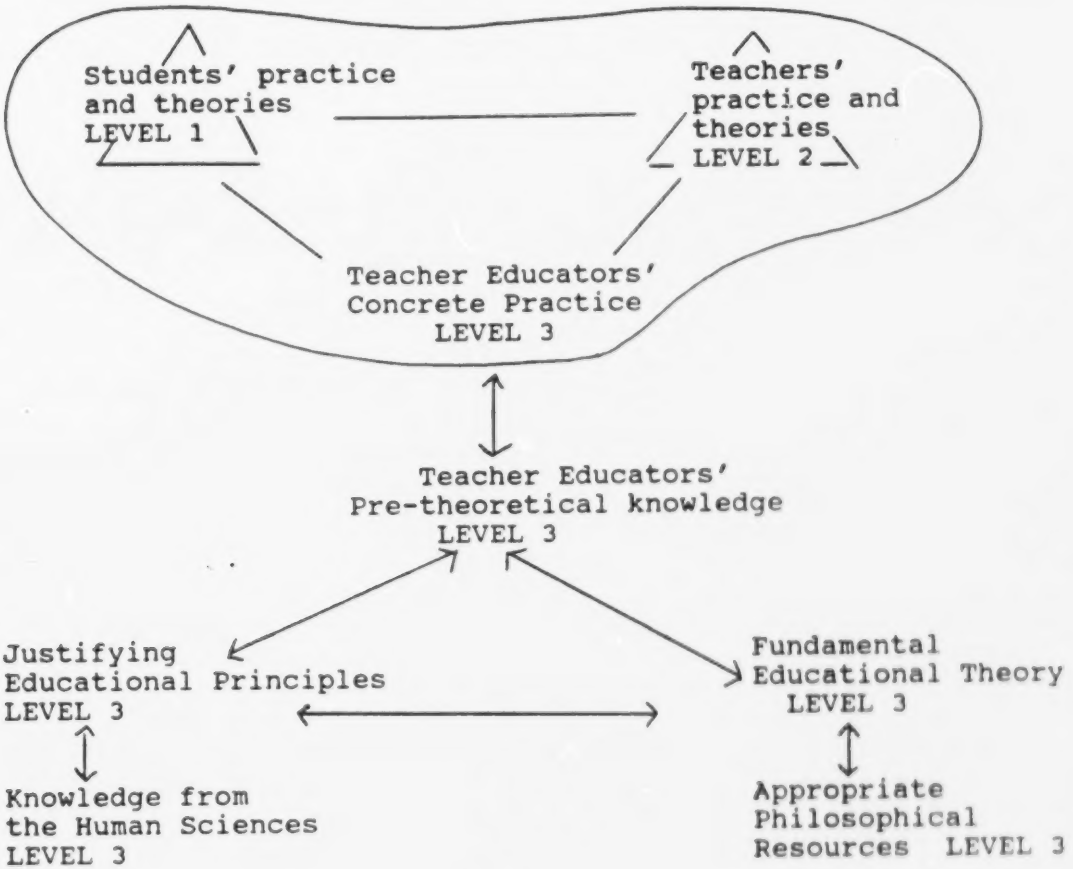
Student teachers, teachers or teacher educators will not be seen as completing circuits of their respective triangles as if they were on a race track. The implications of the model are much more partial than that, as are the metaphorical routes around it. Nevertheless, the model can be of use in calling to mind the metamorphic nature of the theorisation and implementation of practice by identifying the location of any particular activity with respect to the disparate elements indicated on the diagram. For example, a student discussing a lesson with a teacher or supervising tutor will be active in the area of the diagram between 'practice' and 'fundamental educational theory', i.e. transforming 'practice' through its articulation, 'pre-theoretical knowledge', towards more abstract descriptors of the process of teaching, 'fundamental educational theory'.

In general, levels 1 and 3 of this model will be used to describe students and teacher educators within this project as they engage over time with the activities of interpreting and re-interpreting current practice; forming and reforming theories. Level 2 of this model, representing teachers' theorising, will be used only in a limited sense, as explained above; to represent the theories of teacher educators about their own experiences as teachers. It has, therefore, a different time structure from the levels which precede or follow it. It is essentially historic since the largest part of a trainer's direct personal knowledge of teaching in classrooms will be in the past, In contrast, the activities as mapped by the diagram (and based in part on this past experience) will be present-time events. In this connection, we consider that it is an appropriate activity for teacher educators to continue to struggle to refine their interpretations of their own teaching experiences, if not necessarily to continue to teach in classrooms themselves.

The levels are hierarchical, although not in a simple linear manner. A teacher educator has within the remit of his or her day-to-day professional practice, the classroom actions and theories of their students training together with classroom experiences and theorisation about teaching itself. Thus, for example, a student's theorising (level 1) is seen as one of the constituent elements of teacher educator's concrete practice(level 3), as is their own past experience in the classroom (level 2 but forming part of their practice at level 3).

More generally, the levels are envisaged as related to each other as shown below:

Diagram 3 Relationship between level 1, level 2 and level 3


Students' practice and theories LEVEL 1
Teachers' practice and theories LEVEL 2
Teacher Educators' Concrete Practice LEVEL 3
Teacher Educators' Pre-theoretical knowledge LEVEL 3
Justifying Educational Principles LEVEL 3
Fundamental Educational Theory LEVEL 3
Knowledge from the Human Sciences LEVEL 3
Appropriate Philosophical Resources LEVEL 3

This three level model was used as a framework for analysis for both the data collected from student observations, represented as Level 1, (see Part 3 of this paper) and the dialogues of the teacher educators/researchers which are seen as largely appropriate to Level 2 and 3 of the model (See part 4 of this paper).

PART 3 THE STUDENTS, THEIR PRACTICE AND THEIR THEORIES

A. Data Collection

This section describes the actual research project carried out. Field details of our findings are published elsewhere (Edwards and Grenfell 1993). A brief review of this is offered here so as to give a practical research context for our theoretical and methodological discussion.

The study was largely based on data collected by naturalistic observation of student teachers (Ackroyd and Hughes 1981). Research based on behaviourial observation has been criticised (Doyle 1986) as not stemming from an argued framework and therefore providing poor material for further theorisation. Nonetheless, qualitative observation can provide an effective means of developing practically based hypotheses for further investigation(Croll 1986). We would argue that the close relationship between researchers' pre-existing theories and their observations provides the mechanism which allowed us to combine observation, analysis and reflection of student behaviours to form a method for making explicit our theoretical presuppositions as teacher trainers.

B. Exploring Students behaviours

The project was in part an attempt to broaden the range of our information about observable student behaviour on teaching practice, whilst considering how we and they interpreted these experiences. As far as possible we have tried to preserve the authenticity of the students experiences and of our own practice by using data gathering methods which "mimic" the supervisory procedures adopted within the PGCE course. We were interested in uncovering similarities and differences in the classroom practices of students teaching different subjects and the characteristics shown by these. We were not expecting to establish clear generalisable relationships, but to identify issues for more detailed investigation.

Practical constraints shaped what could be tackled: our pre-existing schedule of student visits and the fact that individual student assessments were already well underway. Consequently, a small scale study was planned to focus on the work of four students reflecting these fixed parameters:

(a). Subject specialism - Mathematics and Modern languages
- two students from each subject

(b). Quality of Teaching performance - two "strong" and two "weak" students, selected on our experience and assessment so far in the course.

The four students identified for this study were chosen to represent the range of characteristics one might expect from PGCE students who

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achieve qualified teacher status:

Andrew - a weak Mathematics student;

Jackie - a struggling Modern Languages student;

Joan- a strong student with an enthusiastic, but commonsense approach to Modern Languages teaching;

Sam - an unusually articulate and energetic Mathematics student.

1. Observing lessons

One lesson from each student was observed by the researcher not of their subject discipline. This provided a means of making the familiar unfamiliar (Schutz 1964) to the observing tutor. By arranging this dislocation, we hoped to be able to identify some of the assumptions, customary forms and established structures used in mathematics or modern languages classrooms. By "cross visiting" we would each have seen all of the students teaching and would provide ourselves with shared exemplars of each of our starting categories; for example, strong modern languages student.

2. Extended visits

In order to investigate a typical student day, we shadowed each of our own students for a "day": in practice this turned out to be from before school, 8.30 a.m., until after lunch, about 2 p.m. Our concern was to try to capture the range and nature of the activities in which a student teacher engaged over an extended period and to categorise these.

3. Debriefing discussions

After observing a student teach a lesson, a debriefing interview is normal practice - this we maintained. The supervisor and student discuss the lesson itself and more general issues about the student's experiences in school. These interviews were extended to discuss with each student their views about their own practice and what they felt were important issues for developing their classroom skills. This resulted in a collection of students' comments which point to their own theories about teaching.

C. Supervisors' Discussions

Throughout the period of lesson observations and interviews, the researchers met and explained to each other what had been noticed, what it had been possible to record, together with anything which occurred unexpectedly. These discussions greatly influenced the analysis and reporting of the data about the students' practice and provided the substance for any fresh insights into the researchers' practice as teacher trainers.

The diagram below is one outcome of these discussions and indicates how we saw the elements of a PGCE course (the variety of inputs and personnel involved) relating to the students' practice and theorising about their practice as previously expressed in the Vandenberg triangle.

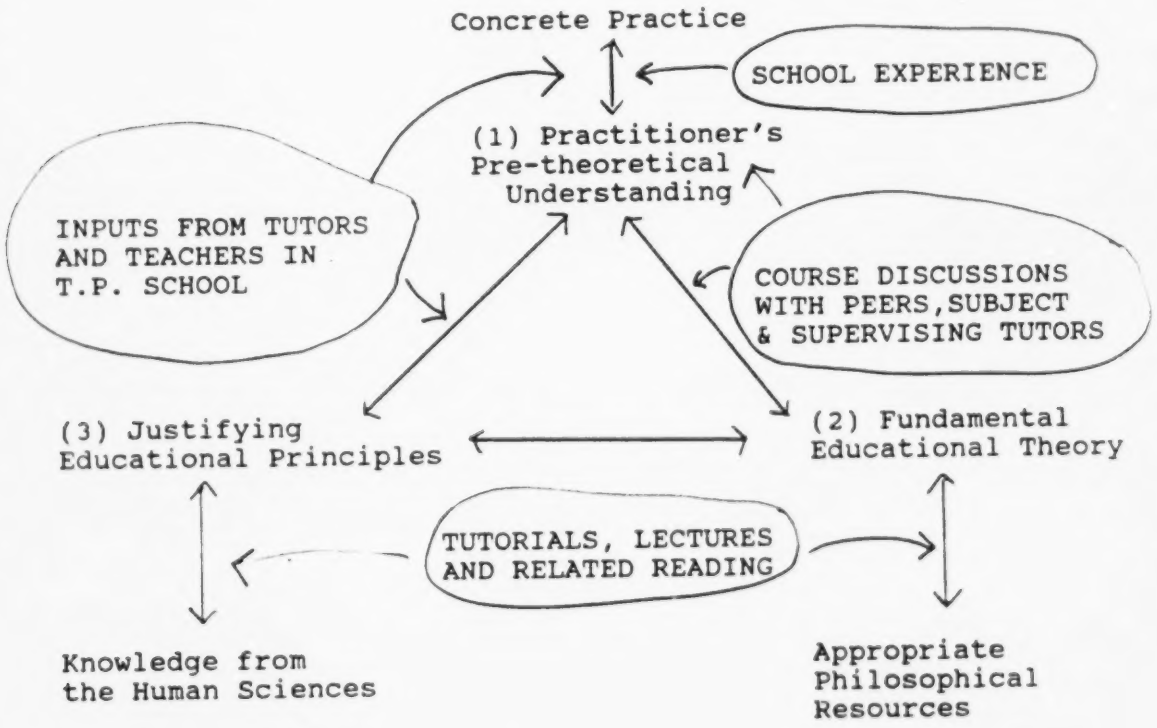
Concrete Practice
SCHOOL EXPERIENCE
(1) Practitioner's Pre-theoretical Understanding
INPUTS FROM TUTORS AND TEACHERS IN T.P. SCHOOL
COURSE DISCUSSIONS WITH PEERS, SUBJECT & SUPERVISING TUTORS
(3) Justifying Educational Principles
(2) Fundamental Educational Theory
TUTORIALS, LECTURES AND RELATED READING
Knowledge from the Human Sciences
Appropriate Philosophical Resources

Diagram 4 Relationship between Students' theorising and elements of the PGCE course.

In Diagram 4, the university tutor (teacher educator) is involved at all stages of the triadic development of student's practice and theorising. This reflects the course structure in 1992.

(Since then, significant changes have taken place in the respective roles of university tutor and teacher during school experience, with teachers now making a major input to the areas

at the top of the diagram. This has produced a loss of continuity between theorisation and practical application which can only be seen as unfortunate.)

D. Students' behaviours and their theorising

The data collected from the lessons' observed and from the extended visits gives a view of the activities the students undertook during their term's school experience: In particular, some snapshots of the students as they attempt to work with the tensions between their developing understanding of classroom practice and their ability to operationalise this knowledge. These activities would appear on the Diagram 2 as the connection between 'concrete practice' itself and its initial articulations, ' pre-theoretical knowledge', (shown as Area 1). The comments from the students' debriefing interviews provide some direct insights into the student's ability to be explicit about what they think they are trying to achieve in their teaching. This process of explication results in their theorising about their practice and would situate itself on Diagram 2 somewhere on a continuum between 'pre-theoretical knowledge' and 'fundamental educational theory', (shown as Area 2).

Our data collecting activities furnished material for several types of outcome. Further details of the project and its findings have been published elsewhere (Edwards and Grenfell 1993). The following is a brief synopsis by way of illustration.

(i) The strong students were found to initiate a high proportion of classroom interactions; achieve between a half to two thirds of those interactions about learning; spend roughly 20% of their time on disciplinary interactions.

(ii) The findings also indicate that a languages student's classroom can often be teacher dominated: i.e. teacher directing activities, whilst a mathematics classroom involves many one-to-one exchanges with pupils.

(iii) Both of the ML students used English and French to communicate with pupils. This gave rise to a series of interactions which were administrative in purpose but where the student spoke in the target language. e.g. "Ouvrez vos cahiers."

(iv) There appears to be a difference between the subject areas in the nature of the interactions themselves. In the language lessons, an interaction was usually direct - one person asking the other about themselves or their knowledge. e.g. "Cachez cette feuille de papier."
In mathematics lessons, interactions were often indirect - about a object or idea external to the participants in the exchange. In this example, the interaction is focused on the text of a workcard:

Pupil: Sir, I still don't understand.
(holding workcard)
Student: Four right angles? (looking at card)
P: Yea?
S: How many degrees in a right angle?
P: Ninety
S: So it's four nineties

This dialogue illustrates one qualitative difference between the two subject classrooms. In the Modern Languages teaching observed, language itself was problematised within the classroom as a direct focus for pupils' learning. In the Mathematics lessons, language was used indirectly: as a means to solving mathematical problems presented within the classroom context.

Students theories about their experiences are suggested by their comments to their supervisors. For example, in thinking about lesson planning they show a wide range of responses:
Sam - "If you plan too much, you lose flexibility."
Jackie - "I keep thinking and thinking what to do in lessons, but I can't always come up with something. I'm getting so tired that I can't think of anything."
Joan - " Because it's my first time, I don't know how long it's going to take me. It usually takes longer than I think."
Each student engaged with a different dimension of the process of planning a lesson. Jackie was concerned with the practicalities of being able to plan a lesson. Sam noticed a less than straightforward relationship between a teacher's plans and what actually happens in the classroom and is grappling with his ability to control this. Joan looked at her own development and effective use of her time.
Jackie's concerns were operational; Joan and Sam's qualitative.

These snapshots are offered to represent the flavour of what we saw and heard. In each case, the outcomes were of course inconclusive, but provided useful bases for asking further questions, for example, about the relationship between students' classroom capabilities and their socialisation on teaching practice.

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PART 4 TEACHER EDUCATORS AND THEIR PRACTICE

This part of the paper falls into three distinct sections: the first is an attempt to describe the actions we took and their inter-relationship; the second section explores the applicability of a model of the dialogic process and the third section offers an example of the nature of the dialogic process itself.

A. Dialogues - An Ad Hoc method

An essential element of the work undertaken throughout this project proved to be dialogue. We discussed our intended actions, then explained to each other what had been done and what had been observed. Agreements were noted and different interpretations examined further. Some discussions took place casually as part of the interactions within a working day; some were formal meetings, some of which were tape recorded. At the centre of the study was the observation and discussion of student experiences. This topic was the focus and vehicle for articulating our practice as teacher trainers. Discussing the actions of individual student trainees is an activity which fundamentally characterises the practice of teacher trainers. We were therefore acting authentically as teacher trainers.

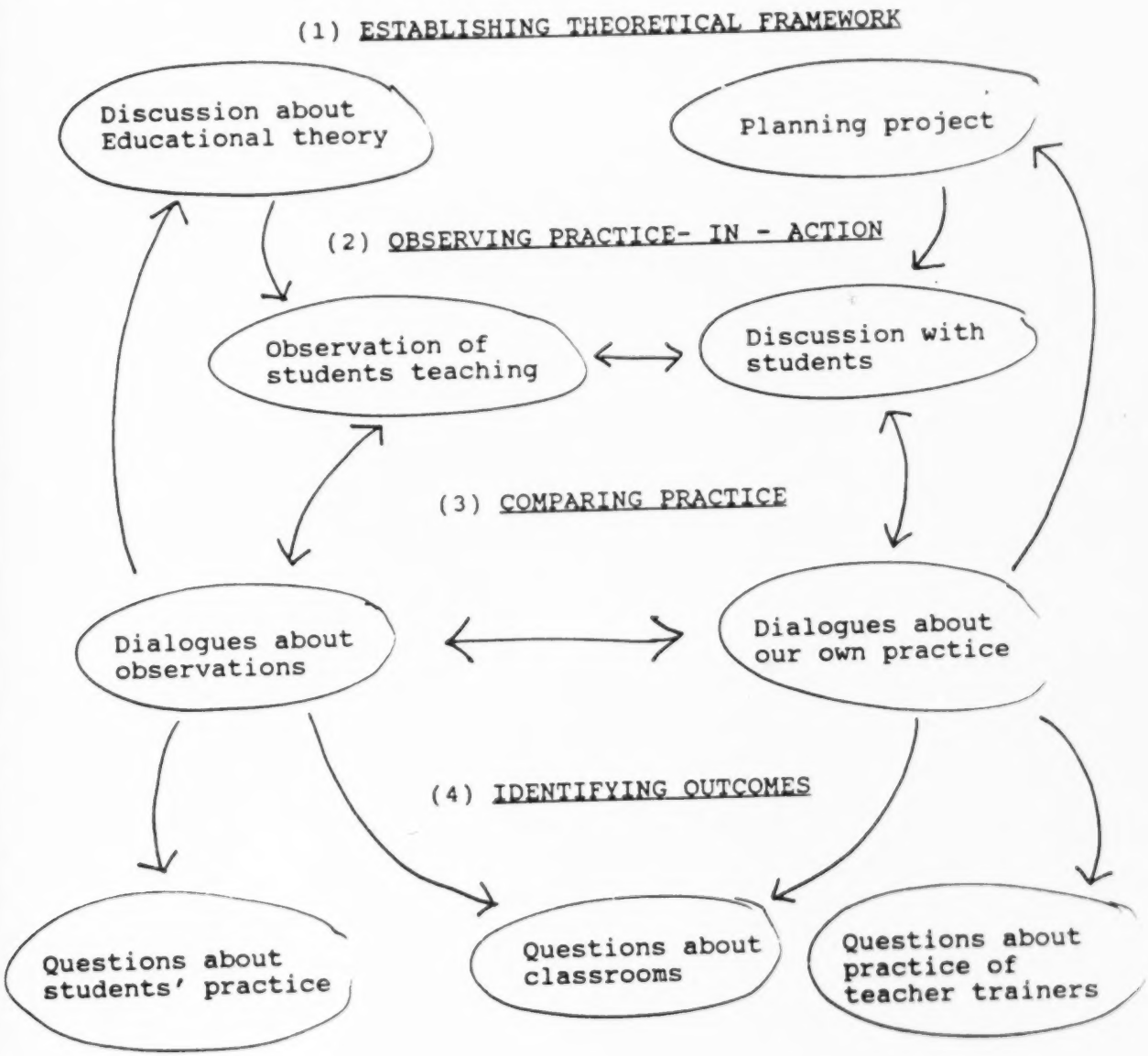
In contrast, our reflexive awareness of the nature, content and structure of our discussions suggests that it is reasonable to interpret the outcomes of these discussions and the discussions themselves, as research data in the same way that informal interview methods are seen to elicit research data. (Powney and Watts 1987). However, in dialogues like these between similarly experienced practitioners, each takes the part of observer or interviewer; asking questions, following up particular points and clarifying meanings. The conversational asymmetry which Walker (1985) attributes to the relationship between interviewer and interviewee does not exist here. This process is a two-way one. At any one moment it would be possible to identify a questioner and a questioned but over a period of time, both participants explained their actions, exchanged interpretations and asked questions. No clear long term differentiation existed between how each acted in the discussions. Thus the parts of interviewer and subject were both fulfilled although not assigned uniquely to either participant.

In other words, our actions can simultaneously be interpreted as typical of and legitimate within the practices of both educational researchers and teacher trainers.

In choosing the title "an Ad-hoc method" for this section we are putting forward the notion that embedded within our particular developmental undertaking lies a set of activities which can perhaps be crystallised to reveal a more general strategy or method. A first step in this direction is an attempt to describe the sequence of processes which gave rise, in this case, to an articulation of practice. There seem to have been four

distinguishable processes within this work: establishing a theoretical framework; observing practice-in-action; comparing practices; and identifying outcomes. Each of these elements was identified within the dialogues themselves, although they seldom occurred as the discrete processes which they necessarily appear to be when represented diagrammatically. They are, in fact, the constitutive elements of a continuous dialogue in a state of development and flux.

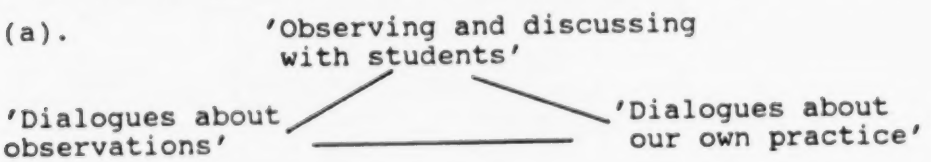
Diagram 5
A sequence of processes which form an articulation of practice



This diagram combines 'what we did and thought' (in lower case type) with a more abstract description (IN UPPER CASE TYPE) of what we <u>now</u> feel those actions and ideas can be represented in terms of the overall structure of the undertaking. For example, 'ESTABLISHING A THEORETICAL FRAMEWORK' is a way of describing the structural position of two types of conversations: (a) those focused on our joint readings of articles by Vandenberg and Hirst about the nature and status of educational theory and (b) those through which we defined the intentions, scope and particular character of this project in terms of who and what to observe and how often. In other words, the lower case descriptions of the diagram are intended to offer exemplification and illustration of how the more abstract processes manifest themselves in practice.

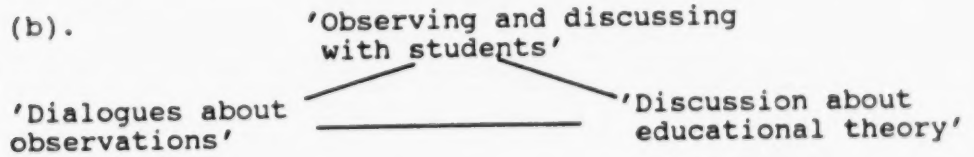
The arrows on the diagram are intended to represent the general movement over time between the specific actions and ideas with which we were involved; showing a movement from the initial construction of a theoretical framework (at the top of the diagram) to the identification of practice- related questions which were the outcomes of this project (shown at the bottom of the page). As can be seen from the diagram, these shifts were far from linear, but tended to feedback into one another, forming several distinct and interrelating cycles. 'OBSERVING PRACTICE-IN-ACTION' (observations of and discussions with student teachers), occupies a central position in several of these time cycles and is at the heart of the process of articulation represented here. Examples of these time cycles are:

(a).



'Observing and discussing with students' is both the starting and end point within one such cycle which relates 'Dialogues about observations' and 'Dialogues about our own practice' in a process of examination and review of practice-in-action.

(b).



'Observing and discussing with students' constitutes the link which provides feedback between 'dialogues about observations' and our 'examination of educational theory'; in particular, the practical application of the Vandenberg triangulation as a means of locating the relative structural positions of practice, principle and theory.

The diagram is an initial speculative representation of what appear to be the defining processes which combined to produce an articulation of practice within this project. It is presented here in a form which we intend to be suggestive of a method with more general applicability. This theme is returned to later in the paper.

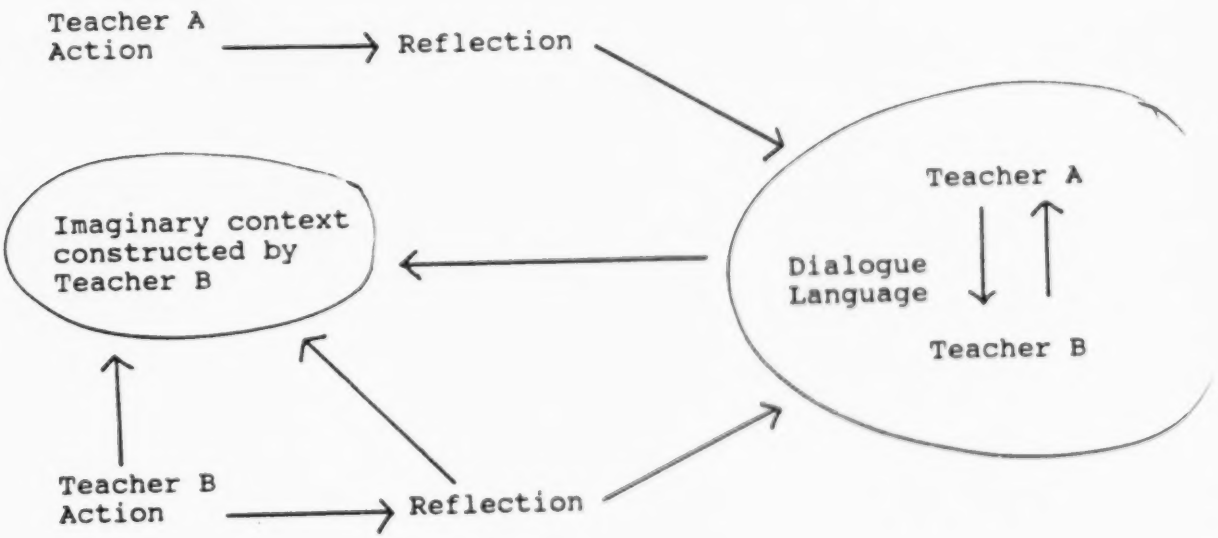
B. The Explication of practice

This section looks more directly at the nature of the dialogue between two similarly experienced practitioners and briefly explores the effects of extending the applicability of a model developed as a description of communication between two secondary school teachers.

Any joint action necessitates communication and hence a consequent metamorphosis of ideas into syntactic form (articulation of practice). Chambers (1986) models this dialogic process as it occurs between two teachers as resulting in the creation of an imaginary context by one teacher of the described experiences of the other teacher. This she illustrates diagrammatically as follows:

Diagram 6
The dialogic process between two practitioners:

Teacher A initiates the process, Teacher B responds.



Replace teachers A and B by teacher educators A and B and this diagram offers a simple model for the character of the early discussions between the participants in this study. Our individual actions and reflections, as shared within our

dialogues, are then depicted as leading to the construction of imaginary contexts. In this case, these would be imagined mathematics or modern languages classrooms and students. These 'imaginary' classrooms allowed us to establish a shared theoretical framework for our undertaking. They did not allow us to be sure that practice we shared only in syntactic form related to comparable real-life classroom forms. This is a disadvantage shared with interview techniques where,

> what interviewees say they believe, prefer and do, may not correspond with 'actuality.
>
> (Powney and Watts 1987: 190)

However the visits we made to observe each other's students provided each of us with direct experiences of previously only imagined contexts and consequently, changed the nature of our later discussions. We were now able to use our classroom observations to illustrate and validate our previous theorising and to provoke further more practically based questions and hypotheses.

At the start of the discussion of any given issue, one of us tended to focus initially on theory and theory formation, whilst the other usually focused on the relationship to practice. Thus, there were significant differences between us in both descriptions and interpretations of student's classroom practice. These differences proved to have considerable generative power when discussion about actual examples of student's practice was undertaken. Working <u>with</u> these differences, not to resolve them, but to extend meanings beyond their originating context, gave rise not only to a clearer view of previously undisclosed levels of our own practices as teachers and as teacher educators but also to new insights into our respective subject specialisms. This is not to claim that co-operation in itself is a sufficient condition to produce fresh insights but, that, in these particular circumstances, it proved to be an effective tool for the explication and articulation of practice into the domain of language (i.e. into 'pre-theoretical knowledge') and hence argumentation, (in other words, a struggle towards Vandenberg's 'fundamental educational theory').

Habermas writes of this process of explication that:

> The communicative practice of everyday life is immersed in a sea of cultural taken-for-grantedness, that is, of consensual certainties ... As soon, however as an element of this naively known pre-reflexively present background is transformed into the semantic content of an utterance, the certainties come under the conditions of criticizable knowledge; from then on disagreement concerning them can arise.
>
> (Habermas 1978: 272)

In this project, disagreement did not lead to 'agreement by force of argument' (ibid.) and hence a shift to strategic action, but to the bringing into being of new images and extended meanings. In fact disagreement, in the sense of the meeting of differing pre-suppositional states, served as a trigger for the explication of those states and hence, proved to be the very source of fresh questions and hypotheses.

C. An Example

The multifaceted structure of the dialogic process in which we were engaged is demonstrated in the extract which follows, as are some consequences of our deliberate 'dislocation of practice' in visiting students from each other's subject specialism.

The extract is annotated with our later comments and with references to the theoretical framework described in Part 2 of this paper. These annotations are given in Capitals.

EXTRACT FROM TAPED DISCUSSION ABOUT LESSON OBSERVATIONS

M: The problem I had when I watched Andrew is that ...

C: Read me that bit in there ...

M: I couldn't really work out what was going on.

(WITHIN THE THEORETICAL FRAMEWORK OFFERED IN PART 2, THIS WOULD BE SITUATED AT LEVEL 3 - TEACHER EDUCATORS' THEORISING: AN ATTEMPT, AS YET UNSUCCESSFUL, TO ARTICULATE PRE-THEORETICAL KNOWLEDGE)

M: To begin with it says ... I wrote down about five minutes into the lesson ...

"At this point I'm mildly mystified. What's going on? At this point in time I can see some pupils working intensely; some pupils chatting about leisure; a pupil talking to Andrew in the front."

(THIS EXTRACT FROM LESSON NOTES CAN BE SIMULTANEOUSLY SITUATED IN LEVEL 1, AS A DESCRIPTION OF A STUDENT'S PRACTICE; IN LEVEL 2, AS A MORE GENERAL EXAMPLE OF TEACHERS' PRACTICE; IN LEVEL 3, AS PART OF THE OBSERVATIONS WHICH FORM TEACHER EDUCATORS' PRACTICE)

M: I couldn't actually see what was going on.

(NOT A LACK OF OBSERVATION, BUT AN UNCERTAINTY OF INTERPRETATION IN AN UNFAMILIAR CONTEXT.)

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C: So what you can do is describe who's where and what they are doing but you haven't got a story line about it. Is that what you are saying?
There is a difficulty in interpreting it.

(LEVEL 3 - THE DIFFICULTY HERE FOR TEACHER EDUCATORS IS IN MOVING FROM PRE-THEORETICAL KNOWLEDGE TO MORE THEORETICAL STATEMENTS AND DEMONSTRATES THE HERMENEUTIC NATURE OF THIS MOVE.)

M: Yea. I mean Yes. I made notes later on, you know ...
" What about organisation, input, task, lesson plans? "

(LEVEL 3 - A TEACHER EDUCATOR'S BEING EXPLICIT ABOUT HIS PRACTICE)

M: In other words, those are the sorts of things that I'm looking for when I go to observe a student.

(LEVEL 3 - MOVING FROM PRE-THEORETICAL KNOWLEDGE TOWARDS FUNDAMENTAL-EDUCATIONAL THEORY)

M: They didn't seem to be happening in this lesson and you know I'm saying ... I said, after that point ...
" Work slowly seems to be coming together. Pupils are settling down. Yes, some work is going on, but I'm asking myself what the student's input is?"

(BOTH LEVEL 1 - DESCRIPTION OF STUDENT'S PRACTICE AND LEVEL 3 - TEACHER EDUCATOR'S PRACTICE/ PRE-THEORETICAL KNOWLEDGE)

C: That sort of ties in with what happens when I went to see Joan's lesson and my first ten minutes in there I was just completely at sea.
I felt as if I had no way of building up a story about what was happening. This just wasn't something that happened in a maths lesson.

(LEVEL 3 - ANOTHER EXAMPLE OF AN INITIAL INABILITY TO INTERPRET IN AN UNFAMILIAR CONTEXT.)

A necessity to articulate similar to that exemplified here, occurs in research interviews, and is noted by Walker as giving rise to the possibility that, "interviews can open up areas of dialogue in taken-for granted areas" (op. cit.: 117).

This statement appears to be a good description of the process taking place within the taped extract. It also serves to highlights similarities between the nature and consequences of informal interviews of teachers by researchers and these dialogues between teacher educators.

As the above taped extract shows, the intention to 'articulate our practice ' was realized at least in part, but not in a manner we had foreseen. To be more specific, our initial inability to assign specific meanings to our observations of students (e.g. " I was completely at sea ... ") whilst maintaining a strong sense of the development of the lesson itself (e.g. " work slowly seems to be coming together ...") was not expected. This inability to develop an early interpretive narrative about a student's lesson and our 'surprise' with this, combined to lead directly to an articulation of the practice of using lesson indicators (e.g. " organisation, input, task and lesson plans") to orientate oneself within a lesson.

As was suggested in the previous section, a close parallel can be seen between these dialogues and research interviews. Powney and Watts claim that, within interviews, "ideas may be generated which would not have occurred to any one individual. Successive discussion can both accelerate and retard participant's thinking in unanticipated ways" (op. cit.: 189). Such does appear to be the case in this transcript.

This section has offered as a brief illustration of how the dialogues began to bring to the surface some of the ideas which underlie the practice of teacher trainers e.g. the dual characteristics of using specific lesson indicators (input, task etc.) and the early construction of a working interpretive narrative about a student's lesson.

PART 5 HYPOTHESES AND QUESTIONS

It would not be unreasonable to anticipate that any outcomes of this dialogic process would occur at the 'highest' level of generality, (Level 3 : Teacher Educator's practice and theorising) and could most probably be characterised as occurring within the areas of 'fundamental educational theory' or 'justifying educational principles'. However it can be seen from the extract, that such dialogue flows freely between the three levels of our theoretical model, (see Page 26). Short sections of the dialogue can sometimes be interpreted as situated on two or three levels simultaneously. For example, the section on the first page of the extract which begins "... I can see some pupils working intensely ... " can be seen as a description of a particular student's practice (Level 1 of our Theoretical framework), or as a more generalised description of what can happen in any classroom (Level 2) or as a teacher educator's description of his/her observations on a student visit. Whilst all of these interpretations place the statement clearly in the 'practice/ pre- theoretical knowledge' region of Vandenberg's triangle, the hermeneutic ambiguity indicated above situates the extract simultaneously at each of the three levels of our theoretical development of this model (See Part 2). Such is not an unfortunate equivocation, but a structural characteristic which gives the model its capacity to move towards matching the embedded nature of the dialogues and the reflexive nature of teacher educator's practice.

One of the principal reasons for choosing to develop a framework from Vandenberg's triangular model was its recognition of the two-way connections between practice and theory, i.e. theorising grounded in practice and practice based on theoretical assumptions. Given this starting premise for discussions and analysis, it is not surprising that the resulting insights vary not only in their generality but in their degree of abstraction and in their fields of application.

Dialogues like these 'flow' not only in terms of the degree of generality of the discussion but also in terms of the themes under discussion. Themes dominate discussion, then recede, only to return at a later stage. This character necessarily produces many cross references and the possibility that a theme can continue to be developed at intervals within these cross-references. The developments of these themes are intertwined with one another; thus making the 'content' of the discussion connected and mutually dependent, not separable.

It seems appropriate at this point to exemplify both the nature and content of outcomes by offering some further short extracts. In order to preserve some flavour of the cross-referencing within the discussions all of the extracts are taken from the same taped discussion as the previous extract. As students' practices themselves were considered in Part 3 of this paper, the extracts are offered here under two headings: Knowledge about classrooms ;and Knowledge about our own practice.

A. KNOWLEDGE ABOUT CLASSROOMS
(LEVEL 2 Teachers practice and theorising)

Discussion about how to interpret what occurred in the mathematics students' lessons led to the following exchange with its declaration of the mathematics teacher educator's pre-suppositions with respect to lesson organisation and planning:

> C: ... I've actually got a picture of what happens to me when I go and visit students and I might hit a lesson where they are starting a topic off ... where there's being one lesson where something is started for a week or a fortnight so the kids' work is started off ... this is the focus... this is what we are looking at today and there could be a considerable input at the beginning of that lesson from the teacher but that's actually going to keep them going roughly for a fortnight. There might be a small resume sometime, but generally speaking the kids know what they are doing.
>
> Like the lesson that I went in to see that Sam did, where he started out the lesson by saying, " I want you to finish off your Stats work." Now that was because they were at the end of a fortnight's work.
>
> M: It's much more discrete, much more discrete in modern languages.

The first part of this dialogue is a description of how a sequence of mathematics lessons are often organised and taught. This description was provoked by consideration of Andrew and Sam's lessons, but it is grounded in considerable prior experiences of teaching i.e. it is an articulation of the practice of a teacher. The abstraction of the above statement from any particular classroom or teaching incident places it on the continuum between pre-theoretical knowledge and 'fundamental educational theory' some considerable way towards 'fundamental educational theory.' In fact, each of the quotes given here can be envisaged as moving towards hypotheses, based in practice-in-action; i.e. specific examples of student practice.

The latter reference to one of Sam's lessons shows the use made of the student observations as shared exemplars of the range of classroom practices in our respective subjects. It also indicates a return to 'practice-in-action'; a check of
the authenticity of the more general statement by asking 'Does it work for this particular example?'

The last comment of this extract makes a brief comparison between the organisational forms of mathematics and modern languages classrooms, indicating that there are at least noticeable differences in our own experiences of teaching and probably also in the norms currently adapted in schools.
Whilst the extract points to the existence of marked differences between subjects, the differences appear to be those of degree or emphases.

The following two extracts offer other references to this same theme:

> C: ... You don't very often get one-off lessons in maths classrooms.

This concise statement is a corollary of the earlier implicit hypothesis that 'longer term planning predominates in mathematics whilst planning single lessons has priority in language teaching'. Such is not to make the claim that either of these hypotheses is true but that the questions which are now arising, indicate the existence of new areas for exploration about the predominant forms of classroom planning and organisation and their frequency of occurrence of in mathematics and modern languages classrooms. The development of this theme is illustrated by the next quote.

> C: What I find interesting about this whole thing is that I'm actually left with questions like ... would it be possible in a modern languages lesson to ,say, use the sort of form that's fairly common in maths? ... where you set something up and then the kids would work independently for a week or a fortnight.
> M: Well, it would
> C: I mean with or without materials.
> M: It would, I mean that's what all the task based, group work, autonomy approach is about.

This dialogue indicates how phrases commonly only applied to the practice within one subject area, modern languages here, could be extended in meaning by relating them to differently named but similar phenomena existing in the classroom practice of the other subject.

> C: Now the stuff you saw for Andrew ... it's even stronger there because using the SMILE materials ... what the school actually have done is set up a sort of backbone of work that those kids have got ... that's got a time scale of a year and every so often they will do ... they might do a one-off lesson ... or they might do a week of doing something else but all the time they have got this state of We-can-go-back-to-using-SMILE.

This is a description of typical practice for a particular individualised learning scheme for mathematics, SMILE. The interest in the quote lies in its identification of different time scales in planning and organising the work of classes.
It again shows the use made of the student observations ('the stuff you saw for Andrew ...') to relate the range of possible classroom practices to 'practice-in-action'; in this case to illustrate what it might look like in action.

B. KNOWLEDGE ABOUT OUR OWN PRACTICE
(LEVEL 3 Teacher educators' practice and theorising)

Although we work on the same initial teacher training course, the course organisation is such that we, each, plan and teach the subject work undertaken with the students, with a high degree of autonomy. This made it necessary from time to time to explain to each other how we made decisions about the students we studied here and about our rationale for the content and structure of our individual subject work.

The first extract gives a brief articulation of what we both agreed were initial foci for our observations when visiting students:

> M: " What about organisation, input, task, lesson plans? "
> ... In other words, those are the sorts of things that I'm looking for when I go to observe a student.
> ... Yes, some work is going on, but I'm asking myself what the student's input is?"

This quote is a straightforward explanation of what a teacher educator is aware that he is doing when he is observing a student. The need to record this, not something that is usual practice, is perhaps a consequence of this observation being part of the cross-subject visits we undertook. The self-awareness of the teacher educator's statement moves this from the realm of practice itself towards 'fundamental educational theory'. It would be a small step to repostulate this in a less personal form and hence, to produce a theoretical statement with general applicability to teacher educators which could subsequently be investigated.

Reflecting again on what a teacher educator's ability to interpret what is happening in a student's lesson:

> M: ... Sam's lesson when I walked in there ... Although he did the same sort of thing ... he went round troubleshooting ... to begin with he set them up. It was a very definite context where he set the thing up, told them what he wanted them to do and they went off and did it. It was the same sort of lesson, but I could still see ... I could make more sense of it, if you like.

This extract, whilst of interest in itself as a example of how a teacher educator describes a classroom not of his subject specialism, is of more interest when seen in the light of the earlier example of the confusion felt by the same person at the beginning of Andrew's lesson. The difference between the two lessons seems to be identified as 'knowing what's going on' the part of the teacher educator. This knowing leads firmly towards fundamental educational theory and to the speculative question : Is it the case that a student who is more explicit with his class about his teaching intentions is judged as more successful by his supervisor?

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This theme is developed later with:

> M: ... It's not surprising that when I come to watch a lesson of one of my students' what I see I empathise with ... because what they are trying to do is what I taught them to do and ditto, in a sense, with you. When you go in and see your lot ... what they are trying to do is what you have taught them to do ... so it's not surprising in a sense that ... It's back to this thing that what you put in is what you get out or what you get out is what you put in.

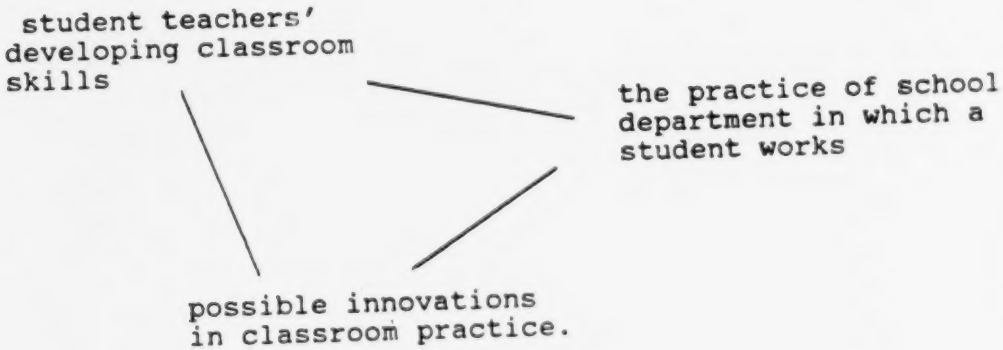
This extract offers a hypotheses about a teacher educator's own practice:
'A teacher educator empathises with the students who are trying to put into practice what they have been taught by the teacher educator.'
This statement points to the interpretative nature of the relationships demonstrated within the framework of analysis: i.e student teachers' practice (level 1) is based upon their interpretations of teacher educators' practice (level 3) which in its turn is based at least in part on their interpretations of their own experiences as teachers (contained within 'practice' at level 2). A fruitful area for investigation would be to ascertain the degree to which this hermeneutic circle determines the practices within it and its relationship to other strong influences on the practices of both students and teacher educators.

Returning to the theme of the autonomous, task based approach in modern languages teaching:

> C: But you are saying that isn't what happens when you go in and look at mathematics lessons...when you go in and look at modern language lessons...
>
> M: No, it's not, because languages aren't at that level at the moment. Departments aren't mostly ... and actually it's quite difficult even with the way things are ... to pitch students at a level where they can work within the structures of departments. You know one or two departments are exploring those areas but as it is, students going in and using a lot of target language and trying to be communicative is sometimes quite a shock for the students because the kids are used to being 'taught'. If they went in, and, you know, revolutionizing the organisation of the class and turning it into a sort of autonomy group type work.... one, it would be an incredible strain for the students to organise like that because they

would be doing it on their own. There would be little support within the department but it would also be a shock for the department. So yes, it is possible, but I choose not to do it. I choose to say that there is something that they are going to do later on.

This extract illustrates a teacher educator theorising about his own practice with respect to classroom innovation, in this case, pupil autonomy. He seems to have constructed a schema which is triadic, relating:


student teachers' developing classroom skills
the practice of school department in which a student works
possible innovations in classroom practice.

The teacher educator describes his intentions when teaching his students' about non-traditional practices such as a task based, autonomous approach by ' I choose to say that there is something that they are going to do later on '. In other words, the existence of innovative practice is indicated but it is implied that it is not part of the immediate practical teaching tasks within the training course. This comment suggests that within a teacher educator's theorising there can exist knowledge about teaching which, for the student teachers, will intentionally remain theoretical within the scope of the training course. This acceptance represents a pragmatic limitation to what is tackled within a ITT course, because the relationship of a school department to classroom innovation is typically outside the direct control of a teacher educator.

Each of these short extracts (and the later comments about them) are grounded in the researchers' experiences of and theories about classrooms and their own practice. As can be seen from the text, the extracts focus critical thoughts on particular aspects of initial teacher training; for example, the place of innovative practice within an ITT course or the nature and role of planning and organising within the two subjects classrooms.

They also serve as a means of identifying particular questions for further investigation.
To give two examples from the many possible formulations:

> What is the nature of the organisation, input, task and lesson planning which is valued by teacher educators in practice?

> In what ways is the students' knowledge and experience of innovative practice limited by the current practices in school departments which they visit?

At this point, it is appropriate to refer to one of the outcomes of this project, not explicitly mentioned so far: the development of teacher education practice. Question-raising activities like this one inevitably have consequences for the subsequent practice of the teacher educators involved; at the very least, the task is approached with a broader view of the possibilities for action and an increased richness to any resulting theorising.

C. Structures and Meanings

Given our stated research purpose, to articulate practice, language has inevitably shaped the outcomes. With the differences in our subject interests, we could not always assume that if we used the same words, we were understanding each other or that the words or phrases we were accustomed to using to describe classroom processes would automatically have meaning within the other subject area.

We were forced to proceed with caution, being aware that, " we are readily impressed by forms of expression, and take common form to be indicative of shared meaning. But it is use, not forms that shows shared meaning" (Baker & Hacker 1985:20).

Consequently we engaged in a process which examined the correspondences between the words and phrases we each used in dialogue and the instances of concrete practice which were manifest in response to the utterance of particular phrases.

For example, 'troubleshooting' a phrase used by mathematics teachers and educators, provoked specific references by both of us to the teaching behaviours of Andrew and Sam in their observed lessons. In this case, common referents allowed us to achieve an agreed correspondence between language and instances of practice, i.e. to agree a meaning for 'troubleshooting' in terms of the observed classroom actions of our students.

Associating 'language use' with a search for examples of actual practice gave rise to several theoretically discrete situations. Two of which showed themselves problematic in discussions:

(a) the same words are used in both subject areas, but they are associated with different practices

(b) words or phrases are used exclusively in one subject area i.e. one-sided utterances, with no obvious meaning in the other subject domain.

Several examples of Type (a) situations have already arisen, viz. lesson planning or classroom organisation where the same phrases relate to different practices in the respective subject areas. See Part 4, Section C for some examples of these.

The second theoretical situation, Type (b) was recognised only after a series of discussions had taken place.

Faced with a recurring phrase which seemed to have only a 'one-sided meaning', a pragmatic procedure was tentatively adopted: (a). Formulate practical characteristics of the phrase's established meanings by identifying examples of practice which would be described routinely by the phrase in question.

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(b). Look, within our student observations, for instances of classroom behaviour which shared some of the practical characteristics of the phrase's established classroom meanings, but which occur in the other subject classroom. If this proved unproductive, extend the search by comparing our own prior experiences in classrooms to locate meaning in the new area of application.

This process of multiple comparisons neatly parallels the use made by Wittgenstein of more than one analogy described in Baker's translation by:

" We then change the aspect by placing side-by-side with one system of expression other systems of expression. - The bondage in which one analogy holds us can be broken by placing another (analogy) alongside which we acknowledge to be equally justified.

(Wittgenstein, translated by Baker 1992)

Viewed as a process this operation sounds complex, but led to some interesting results. Take as an example, 'teaching grammar.'

This has a clearly established meaning in the context of modern language teaching, but no obvious meaning in mathematics teaching. If one considers some of the structural and operational characteristics of 'teaching grammar' in its natural domain (through instances of modern languages classroom practice), it is possible to ask whether a complementary phenomena exists in the new field of application, i.e. mathematics education.
It became apparent that, from the viewpoint of classroom practitioner or teacher educator, 'teaching arithmetic' in terms of mathematics classrooms, occupies a similar structural position to 'teaching grammar' in a modern languages pedagogy.

Over a period of time we also found that the phrases 'using a communicative approach' and 'working investigatively' occurred frequently in our attempts to explain to each other some of the 'problem areas' we faced when working with ITT students. Our interest arose, therefore, from some shared secondary characteristics of 'using a communicative approach' and 'working investigatively'. These were:
(a) our respective valuing of these ways of working as essential components of good practice and
(b) our students' difficulties in adopting an approach which satisfactorily fits these descriptors.

After further exploration of instances from our own experiences of classroom practices', it emerged that it was probable that 'using a communicative approach' occupied a position in the structural morphology of the modern languages classroom roughly similar to that of 'working investigatively' in the context of a mathematics classroom. Such is not to say that these phrases have similar meanings but that they often point to events and attitudes within the respective communities which share essential and defining characteristics.

Following on from all this, several speculative and theoretical questions about the characteristics of classrooms arise here:

> Is it possible to describe the primary characteristics of 'using a communicative approach' and 'working investigatively' to establish the nature of the relationship between the two constructs?
>
> Are there other phenomena which exist in the respective subject domains which can also be related homomorphically?
>
> Is it the case that at some deep level, the structural morphology of all classrooms are the same, but that the structures which are manifest in particular subject contexts are the result of practitioners' valuings of different parts of the structure?
>
> In particular, are the structures which structure both modern languages and mathematics classrooms essentially the same (isomorphic)?

These questions are not ones which admit of simple answers, but which indicate significant areas for future investigation.

PART 6 SUMMARY

Any professional trainers who have tried to discuss seriously his or her actions, may well have encountered some difficulties which appear to us to be inherent in attempts to think rigorously about the embedded relationships between their own practice as a classroom practitioner, about their practice as a trainer, and about the theories and behaviours of their students. In this context, Vandenberg's triadic model initially served as a useful tool for 'navigation.' As we have tried to demonstrate, our development and use of a three-level triadic model to describe the complex practice-theory relationships which exist for professional trainers, has allowed us to locate with some precision the relative positions of our different theorising.

Any prescription which is offered as a general recipe for a co-operative research methodology is necessarily destined for failure. The successful outcomes of this project were due at least in part, we feel, to individual responses to the particular and the accidental elements of the project. Nonetheless, we do feel that there is, here, a general strategy which could serve to point in a direction which has proved useful for us and which we feel has the potential for wider applicability in studying the practices of professional trainers and their students. We therefore offer a description of the sequence of actions and some of the factors we feel are of most significance which have constituted for us a methodology based on co-operative and dialogue.

Diagram 7 Co-operative methodology : a sequence of actions

SEQUENCE OF ACTIONS

Establish shared theoretical framework

↓

Observation of trainees practice

↓

Discussion of trainees practice

↓

Reflexive discussions and
Analysis of discussion

↓

Generate questions and hypotheses

SIGNIFICANT FACTORS : participants and activities

1. EQUALITY OF STATUS
- to ensure that participants treat each other's potentially conflicting perceptions as equally valid

2. COMMON INTERESTS AND EXPERIENCES
- to establish sufficient mutual understanding

3. DIFFERENT EXPERIENCES and AREAS OF APPLICATION
- to provide "dislocation of practice". That is, sufficient disturbance to allow for 'opening-up' of presuppositions about practice

4. THEORETICAL FRAMEWORK
- to allow stability to consideration of different levels of practice, viz. novice, expert and trainer

5. OBSERVATION OF PRACTICE-IN-ACTION
- observing the same people, if not necessarily, at the same time, to permit shared experience
- to anchor the work to what actually happens, not constructed images of it.

6. REFLEXIVE DISCUSSION
- to reveal previously undisclosed assumptions and to formulate new questions and hypotheses.

These seem to us pertinent considerations in retrospect. However, the essence of any co-operative methodology will arise only from the willingness to undertake an interactive, methodological experiment on the part of those involved. The whole of such collaboration will always be different from the sum of the collective parts if each were working on their own. Our own experiments in this area provided us with fresh insights and angles of objectivity with which to develop our personal understandings of the processes within which we were involved and ways of presenting these publicly as a topic of research.

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Bibliography

ACKROYD, S. and HUGHES, J. (1981) Data Collection in Context. London: Longman

BAKER, G. P. (1992) In WITTGENSTEIN's Philosophical Investigations: Text and Context, Arrington R and Glock H. J. (Eds). London: Routledge

BAKER, G. P. and HACKER, P. M. (1988) Wittgenstein. Rules. Grammar and Necessity. Oxford: Blackwell

CHAMBERS, F. (1987) A Teacher looks at her Pupils' Mistakes. Unpublished PhD thesis, University of Southampton

CROLL, P. (1986) Systematic Classroom Observation. Lewes: Falmer

DOYLE, W. (1987) 'Paradigms for Research', In International Encyclopedia of Teaching and Teacher Education. Oxford: Pergamon

EDWARDS, C. and GRENFELL, M. (1993) Interpreting the experience of teaching practice, Conference proceedings, ATEE Annual Conference 1993, Lisbon, Portugal.

ELY, M., ANZUL, M., FRIEDMAN, T., GARNER, D., MCCORMACK STEINMETZ, A., (1991) Doing Qualitative Research: Circles within Circles. Lewes: Falmer Press.

HABERMAS, J. (1978) 'A Response', in McCARTHY T. (Ed.), The Critical Debates of Jürgen Habermas. Hutchinson

HABERMAS, J. (1981), The Theory of Communicative Action. Volume 1: Reason and the Rationalisation of Society. London: Heinemann

HIRST, P. (1966), 'Educational Theory, in Tibble J. W. (Ed), The Study of Education. pp. 25 - 78. London: Routledge and Kegan Paul

LACEY, C. (1977) The Socialisation of Teachers. London: Methuen

MUNBY, H. and RUSSELL, T. (1992) 'Transforming Chemistry research into Chemistry Teaching', in RUSSELL T. and MUNBY H., Teachers and Teaching: From classroom to reflection. Lewes: Falmer Press

OJA, S.N. and SMULYAN, L. (1989) Collaborative Action Research: A developmental approach. Lewes: Falmer Press

POLYANI, M. and PROSCH, H. (1975) Meaning. Chicago: University of Chicago Press

POPPER, K. (1974) Unended Quest. London: Routledge

POPPER, K. (1972) Objective Knowledge. Oxford: Clarendon Press

POWNEY, J. and WATTS, M. (1987) Interviewing in Educational Research. London: Routledge

SCHUTZ, A. (1964) 'The Stranger', in Collected Works of Alfred Schutz: Volume 2. The Hague: Martinus Nijhoff

SCHUTZ, A. (1964) 'The Homecomer', in Collected Works of Alfred Schutz: Volume 2. The Hague: Martinus Nijhoff

STENHOUSE, L. (1975) An Introduction to Curriculum research and Development. London: Heinemann

TRIPP, D. (1993) Critical Incidents in Teaching. London: Routledge

VANDENBERG, D. (1974) 'Phenomenology and Educational Research', in DENTON D. (Ed.) Existentialism and Phenomenology in Education. Columbia: Teachers College Press

WALKER, R. (1985) Doing Research - a handbook for teachers. London: Routledge

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